

ABSTRACT OF THE DISCLOSURE

A dielectric recording / reproducing head is provided with: a probe; a return electrode for returning a high-frequency component of an electric field applied from the probe; and bias electrodes, which are placed under the return electrode. By applying a voltage stronger than a coercive electric field between the probe and each of the bias electrodes, polarization domains are formed which have polarization directions parallel to a surface of a dielectric recording medium. The polarization directions are determined by selecting the bias electrode to which the voltage is applied, and four types of data are recorded on a predetermined site of the dielectric recording medium, which allows multivalued recording. Moreover, the polarization directions of the polarization domains are detected by an electric field which is formed by applying a voltage between the bias electrodes and which is parallel to the surface of the dielectric recording medium, causing data to be read out.